

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 9 and 11-19 are pending in the application, with claims 9, 13 and 17 being the independent claims. Claim 9 has been amended. Claim 10 is sought to be canceled. New claims 11-19 are sought to be added.

Claim 9 has been amended to insert the sequence identifier corresponding to the peptide pI, as required by 37 C.F.R. § 1.821(d). The sequence of the cyclic peptide in claim 9 has also been amended to include "-S-S-" in the bond connecting the two Cys residues of the sequence, to indicate the formation of an intramolecular disulfide bridge between these two residues. Support for this amendment can be found in the specification as originally filed, at page 28, lines 1-4. The specification has been amended accordingly, at page 5, line 29, to insert the sequence identifier corresponding to the peptide pI and to include "-S-S-" in the bond connecting the two Cys residues of the sequence.

New claim 11 is directed to a specific peptide of claim 9, cP226. Support for new claim 11 can be found, *inter alia*, at page 5, line 17, of the specification as originally filed. New claim 12 is directed to a composition of the cyclic peptide pI. Support for new claim 12 can be found in the specification as originally filed, at page 28, lines 13-15. New claims 13-16 are directed to use of a cyclic peptide pI to design compounds that bind to phospholamban (PLB). Support for new claims 13-16 can be found, *inter alia*, at page 5, line 25, to page 7, line 15, and at page 72, lines 19-23, of the specification as originally filed. New claims 17-19 are directed to the use of a cyclic peptide pI to define an area on the surface of PLB which can function as a target for PLB deactivator compounds, and to

subsequently create a three dimensional model that can be used to identify a PLB deactivator compound. Support for new claims 17-19 can be found, *inter alia*, at page 72, lines 1-5, of the specification as originally filed.

Applicants have also amended the specification to insert sequence identifier numbers at all appropriate places within the text, as required by 37 C.F.R. § 1.821(d).

The specification has also been amended at page 11, line 25, and page 12, line 8, to replace "Arg-13" with "Arg-14." Support for this amendment can be found in the specification at page 7, lines 4-5, which indicates that the S2 binding site contains Arg-14, rather than Arg-13.

The specification has been amended further to correct the citation format of two references cited within the text and to correct several typographical errors. Specifically, author names have been added to the *J. Med. Chem.* reference cited at page 14, lines 9 and 10, of the specification as originally filed, and to the *Bioorg. Med. Chem. Lett.* reference cited at page 15, line 5. Moreover, at page 11, lines 7, 10, 13, 16, 22, 25, 28, and 31, and at page 12, lines 5, 8, and 11, "PL" in "PL cytosolic domain" has been replaced with "PLB", the proper abbreviation for phospholamban. Support for this correction can be found, *inter alia*, at page 11, lines 3 and 4, and at page 1, line 5, of the specification as originally filed. Also, at page 4, line 26, at page 5, lines 2-3, and at page 27, line 9, the term "amfiphatic" has been replaced with the correctly-spelled "amphipathic." The misspelled term "PC226" has been replaced with the correctly spelled term "CP226" at page 31, line 28. Lastly, the serial number of priority application U.S. Appl. No. 09/937,119, listed at page 1, line 4, of the specification (added in the Preliminary Amendment filed with the current application on November 28, 2000), has been corrected to "U.S. Appl. No. 08/937,117".

These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendments and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

I. Informalities

The Examiner has indicated an inconsistency in the text of the specification regarding the particular amino acid side chain, "Arg-13" or "Arg-14," in the S2 binding site of phospholamban that forms a salt bridge with the disclosed compounds. (Office Action, at page 2.)

Applicants have amended the specification at page 11, line 25, and page 12, line 8, to replace "Arg-13" with the correct amino acid, "Arg-14." Support for this amendment can be found in the specification at page 7, lines 4-5, which indicates that the S2 binding site contains Arg-14, rather than Arg-13.

The Examiner's objection to the specification has been fully accommodated.

II. Objections to the Claims

The Examiner has objected to claim 9 as not conforming to 37 C.F.R. § 1.821(d), due to the absence of a sequence identifier number in the claim. (Office Action, at page 2, paragraph 1.)

Applicants have amended claim 9 to include the appropriate sequence identifier as required by 37 C.F.R. § 1.821(d).

The Examiner's objection to claim 9 has been fully accommodated. Withdrawal of the objection is respectfully requested.

III. Rejection of the Claims under 35 U.S.C. § 112, Second Paragraph

The Examiner has rejected claim 9 under 35 U.S.C. § 112, second paragraph, as being indefinite because the claim does not define the residue "X" in the sequence of the cyclic peptide pI and thus fails to indicate the exact sequences encompassed by the cyclic peptide. The Examiner has also suggested adding "-S-S-" to the line connecting the two Cys residues of the cyclic peptide sequence in claim 9 to indicate that a disulfide bond is formed between the two cysteine residues of the cyclic peptide sequence. (Office Action, at page 2, paragraph 2.)

To expedite prosecution and without acquiescing in the propriety of the rejection, Applicants have amended claim 9 to provide a definition for "X" in the sequence for the cyclic peptide pI. Applicants have also amended the sequence of the cyclic peptide presented in claim 9 to include "-S-S-" in the line connecting the two Cys residues of the sequence, to indicate the formation of a disulfide bond between these two residues. Accordingly, it is believed that the Examiner's rejection of claim 9 has been overcome, and that this rejection can be withdrawn.

The Examiner has also rejected claim 10 under 35 U.S.C. § 112, second paragraph, as being indefinite because the claim is a dependent claim of a canceled claim (claim 7). Applicants have canceled claim 10 and replaced it with new claim 11, which is directed to a specific cyclic peptide sequence, rendering the Examiner's rejection moot.

The Examiner's rejection of claims 9 and 10 under 35 U.S.C. § 112, second paragraph, has been fully accommodated. Withdrawal of the rejection is respectfully requested.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Ann E. Summerfield
Agent for Applicants
Registration No. 47,982

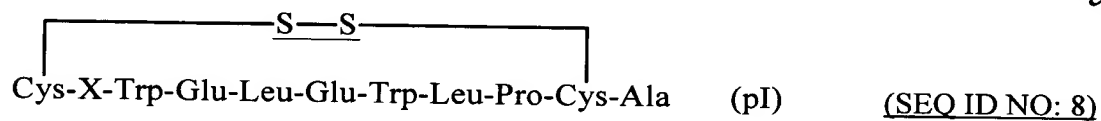
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1100 New York Avenue, N.W.
Suite 600
Washington, D.C. 20005-3934
(202) 371-2600

Version with markings to show changes made

In the claims:

9. (Once amended) A cyclic peptide having the structure:



wherein X is Tyr or Ala.

Claim 10 has been canceled.

New claims 11-19 have been added.

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